INDEX TO VOLUME LVII

SUBJECTS

PAGE

Albedo of Earth, Visual and Photographic. *K. R. Ramanathan* . . 177
Auroral Line by Interference Method, Study of Green. *Harold D. Babcock* 209
B-Types, Partial Explanation, by Wave-Lengths, of K-Term in. II. *Sebastian Albrecht* 57
Bands of Nitrogen, Effect of a Probable Electric Field on. *Snehamoy Datta* 114
Chromosphere, New Method for Measurement of Depth of. *Philip Fox* 234
Classification, Report of Committee on Stellar, adopted by International Astronomical Union at Rome, May 10, 1922. 65
Dispersion of Light by an Electron Gas. *Leigh Page*. 238
Distortion and Accuracy of Photographic Registration of Position, Film. *F. E. Ross* 33
Edward Emerson Barnard, Notice of Death of 128
Electron Gas, Dispersion of Light by an. *Leigh Page* 238
Elements at High Temperatures: Confirmation of the Saha Theory, Thermal Ionization of Gaseous. *Arthur A. Noyes* and *H. A. Wilson* 20
Errata 148, 192
Helium, Crossed-Orbit Model of, Its Ionization Potential, and Lyman Series. *Ludwik Silberstein* 257
Helium, Spectrum of Neutral. *C. V. Raman* and *A. S. Ganesan* . . 243
Helium, Spectrum of, Rejoinder to C. V. Raman and A. S. Ganesan. *Ludwik Silberstein* 248
Hydrogen, Duration of Process of Light Emission in. *A. J. Dempster* . 193
Hydrogen Chloride, Extension of Fundamental Infra-Red Absorption Band of. *W. F. Colby, C. F. Meyer*, and *D. W. Bronk* . . . 7
Infra-Red Absorption Band of Hydrogen Chloride, Extension of the Fundamental. *W. F. Colby, C. F. Meyer*, and *D. W. Bronk* . . 7
Ionization of Gaseous Elements at High Temperatures: Confirmation of the Saha Theory, Thermal. *Arthur A. Noyes* and *H. A. Wilson* . 20
Ionization Potential, and Lyman Series, Crossed-Orbit Model of Helium, and Its. *Ludwik Silberstein* 257
International Astronomical Union. Report of Committee on Stellar Classification 65
K-Term in B-Types, Partial Explanation, by Wave-Lengths, of. II. *Sebastian Albrecht* 57

PAGE

Lyman Series, Crossed-Orbit Model of Helium, Its Ionization Potential, and. *Ludwik Silberstein* 257

Manganese, Pole-Effects, Pressure Shifts, and Measurements of Wave-Lengths in Spectrum of. *George Spencer Monk* 222

Nebula Messier 33, N.G.C. 598, Internal Motion in Spiral. *Adriaan van Maanen* 264

Nebula, Messier 63, N.G.C. 5055, Internal Motion in Spiral. *Adriaan van Maanen* 49

Nebulae, Photographic Studies of. Third Paper. *John Charles Duncan* 137

Nitrogen. Effect of a Probable Electric Field on Bands of. *Snehamoy Datta* 114

X Ophiuchi, Spectroscopic Observations of Both Components of Variable Double Star. *Paul W. Merrill* 251

Parallaxes of B-Type Stars, Spectroscopic Method of Deriving. *Walter S. Adams* and *Alfred H. Joy* 294

b Persei, Ellipsoidal Variable Star. *Joel Stebbins* 1

Position, Film Distortion and Accuracy of Photographic Registration of. *F. E. Ross* 33

Potassium, Series of Multiple Lines with Fourfold Rydberg Constant in Spectrum of. *Knud Aage Nissen* 185

Potassium Vapor at High Temperatures, and Its Bearing on Selection Principle of Quantum Theory, Absorption of. *A. L. Narayan* and *D. Gunnayya* 191

Prominences, New Scouting Spectroscope for. *Oliver J. Lee* 121

Proper Motion, Investigations of. Ninth and Tenth Papers. *Adriaan van Maanen* 49, 264

Quantum Theory, Absorption of Potassium Vapor at High Temperatures, and Its Bearing on Selection Principle of. *A. L. Narayan* and *D. Gunnayya* 191

Radial Velocities of 1013 Stars. *Walter S. Adams* and *Alfred H. Joy* . 149

Reviews:

H. M. Reese, *Light, A Textbook for Students Who Have Had One Year of Physics* (J. R. Roebuck) 63

Paul D. Foote and F. L. Mohler, *The Origin of Spectra* (K. T. Compton) 126

Saha Theory, Thermal Ionization of Gaseous Elements at High Temperatures: A Confirmation of the. *Arthur A. Noyes* and *H. A. Wilson* . 20

Silicon, Vacuum-Spark Spectrum of. *R. A. Sawyer* and *R. F. Paton* . 279

Spectra Extending from Visible Light to Soft X-Rays, Vacuum Arc for Obtaining. *H. Nagaoka* and *Y. Sugiura* 86

Spectra of Alkaline Earth Metals, Explosion. *R. A. Sawyer* and *A. L. Becker* 98

Spectral Lines, Combination of Concave Grating with Lummer-Gehrcke Plate or an Echelon Grating for Examining Fine Structure of. *H. Nagaoka* and *T. Mishima* 92

PAGE

Spectrum of Helium, Rejoinder to C. V. Raman and A. S. Ganesan. *Ludwik Silberstein* 248
Spectrum of Manganese, Pole-Effects, Pressure-Shifts, and Measurements of Wave-Lengths in. *George Spencer Monk* 222
Spectrum of Neutral Helium. *C. V. Raman* and *A. S. Ganesan* . . 243
Spectrum of Potassium, Series of Multiple Lines with Fourfold Rydberg Constant in. *Knud Aage Nissen* 185
Spectrum of Silicon, Vacuum-Spark. *R. A. Sawyer* and *R. F. Paton* . 279
Spectroscope for Prominences, New Scouting. *Oliver J. Lee* . . . 121
Spectroscopic Binaries and Variables, Movement of Line of Nodes in, and Its Consequences. *G. Shajn* 129
Star X Ophiuchi, Spectroscopic Observations of Both Components of Variable Double. *Paul W. Merrill*. 251
Star, b Persei, Ellipsoidal Variable. *Joel Stebbins* 1
Stars, Radial Velocities of 1013. *Walter S. Adams* and *Alfred H. Joy* . 149
Stars, Spectroscopic Method of Deriving Parallaxes of B-Type. *Walter S. Adams* and *Alfred H. Joy* 294
Stars of Spectral Type A, Distribution of Velocities of. *Gustaf Strömberg* 77
Variable Star, b Persei, Ellipsoidal. *Joel Stebbins* 1
Variables, Movement of Line of Nodes in, and Its Consequences. *G. Shajn* 129
Velocities of Stars of Spectral Type A, Distribution of. *Gustaf Strömberg* 77
Wave-Lengths, Partial Explanation by, of K-Term in B-Types. II. *Sebastian Albrecht* 57

INDEX TO VOLUME LVII

AUTHORS

PAGE

ADAMS, WALTER S., and ALFRED H. JOY. Radial Velocities of 1013 Stars 149

ADAMS, WALTER S., and ALFRED H. JOY. Spectroscopic Method of Deriving Parallaxes of B-Type Stars 294

ALBRECHT, SEBASTIAN. Partial Explanation, by Wave-Lengths, of the K-Term in the B-Types. II 57

BABCOCK, HAROLD D. Study of the Green Auroral Line by the Interference Method 209

BECKER, A. L., and R. A. SAWYER. Explosion Spectra of the Alkaline Earth Metals 98

BRONK, D. W., W. F. COLBY, and C. F. MEYER. Extension of the Fundamental Infra-Red Absorption Band of Hydrogen Chloride . 7

COLBY, W. F., C. F. MEYER, and D. W. BRONK. Extension of the Fundamental Infra-Red Absorption Band of Hydrogen Chloride . 7

COMPTON, K. T. Review of: *The Origin of Spectra*. Paul D. Foote and F. L. Mohler 126

DATTA, SNEHAMOY. Effect of a Probable Electric Field on the Bands of Nitrogen 114

DEMPSTER, A. J. Duration of the Process of Light Emission in Hydrogen 193

DUNCAN, JOHN CHARLES. Photographic Studies of Nebulae. Third Paper 137

FOX, PHILIP. New Method for the Measurement of the Depth of the Chromosphere 234

GANESAN, A. S., and C. V. RAMAN. Spectrum of Neutral Helium . . 243

GUNNAYYA, D., and A. L. NARAYAN. Absorption of Potassium Vapor at High Temperatures, and Its Bearing on the Selection Principle of Quantum Theory 191

INTERNATIONAL ASTRONOMICAL UNION. Report of the Committee on Stellar Classification adopted by the International Astronomical Union at the meeting at Rome, May 10, 1922 65

JOY, ALFRED H., and WALTER S. ADAMS. Radial Velocities of 1013 Stars 149

Spectroscopic Method of Deriving Parallaxes of B-Type Stars . . 294

LEE, OLIVER J. New Scouting Spectroscope for Prominences . . . 121

MERRILL, PAUL W. Spectroscopic Observations of Both Components of the Variable Double Star X Ophiuchi 251

MEYER, C. F., and D. W. BRONK, W. F. COLBY. Extension of the Fundamental Infra-Red Absorption Band of Hydrogen Chloride . 7

PAGE

MISHIMA, T., and H. NAGAOKA. Combination of a Concave Grating with a Lummer-Gehrcke Plate or an Echelon Grating for Examining Fine Structure of Spectral Lines 92

NAGAOKA, H., and T. MISHIMA. Combination of a Concave Grating with a Lummer-Gehrcke Plate or an Echelon Grating for Examining Fine Structure of Spectral Lines 92

NAGAOKA, H., and Y. SUGIURA. Vacuum Arc for Obtaining Spectra Extending from Visible Light to Soft X-Rays 86

NARAYAN, A. L., and D. GUNNAYYA. Absorption of Potassium Vapor at High Temperatures, and Its Bearing on the Selection Principle of Quantum Theory 191

NISSEN, KNUD AAGE. Series of Multiple Lines with Fourfold Rydberg Constant in the Spectrum of Potassium. 185

NOYES, ARTHUR A., and H. A. WILSON. Thermal Ionization of Gaseous Elements at High Temperatures: A Confirmation of the Saha Theory 20

PAGE, LEIGH. Dispersion of Light by an Electron Gas 238

PATON, R. F., and R. A. SAWYER. Vacuum-Spark Spectrum of Silicon . 279

RAMAN, C. V., and A. S. GANESAN. Spectrum of Neutral Helium . . 243

RAMANATHAN, K. R. On the Visual and Photographic Albedo of the Earth 177

ROEBUCK, J. R. Review of: *Light, A Textbook for Students Who Have Had One Year of Physics.* H. M. Reese 63

ROSS, F. E. Film Distortion and Accuracy of Photographic Registration of Position 33

SAWYER, R. A., and A. L. BECKER. Explosion Spectra of the Alkaline Earth Metals 98

SAWYER, R. A., and R. F. PATON. Vacuum-Spark Spectrum of Silicon . 279

SHAJN, G. Movement of Line of Nodes in Spectroscopic Binaries and Variables, and Its Consequences 129

SILBERSTEIN, LUDWIK. Spectrum of Helium, A Rejoinder to C. V. Raman and A. S. Ganesan 248

Crossed-Orbit Model of Helium, Its Ionization Potential, and the Lyman Series 257

STEBBINS, JOEL. Ellipsoidal Variable Star, b Persei 1

STRÖMBERG, GUSTAF. Distribution of Velocities of Stars of Spectral Type A 77

SUGIURA, Y., and H. NAGAOKA. Vacuum Arc for Obtaining Spectra Extending from Visible Light to Soft X-Rays 86

VAN MAANEN, ADRIAAN. Investigations of Proper Motion, Ninth Paper: Internal Motion in the Spiral Nebula Messier 63, N.G.C. 5055 49

Investigations of Proper Motion, Tenth Paper: Internal Motion in the Spiral Nebula Messier 33, N.G.C. 598 264

WILSON, H. A., and ARTHUR A. NOYES. Thermal Ionization of Gaseous Elements at High Temperatures: A Confirmation of the Saha Theory 20